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PATENT APPLICATION

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VISCOSITY REDUCTION OF VISCOELASTIC SURFACTANT BASED FLUIDS

[0001] ~~This patent application is a non-provisional application of provisional applications~~

[0001] This patent application is a non-provisional application of provisional application No. 60/194,755 filed April 5, 2000 and Serial No. 60/211,684 filed June 15, 2000.

Technical Field of the Invention

[0002] This invention relates to compositions and methods used in reducing the viscosity of viscoelastic surfactant (VES) fluids, especially for use in treatment of subterranean formations and oil and gas wells.

Background of the Invention

[0003] Viscoelastic surfactant fluids are normally made by mixing in appropriate amounts suitable surfactants such as anionic, cationic, nonionic and zwitterionic surfactants. The viscosity of viscoelastic surfactant fluids is attributed to the three dimensional structure formed by the components in the fluids. When the concentration of surfactants in a viscoelastic fluid significantly exceeds a critical concentration, and in most cases in the presence of an electrolyte, surfactant molecules aggregate into species